CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/Gradation/2014-15

20.05.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, BBMP, Bangalore.

Name of Work : Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.

Reference : EE/BTP/BBMP/KRIDL/WO/ /2013-14

Date of Testing : 20.05.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **25630**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	874	874	3.4	96.6	95-100
22.4	6468	7342	28.6	71.4	60-80
11.2	5656	12998	50.7	49.3	40-60
4.75	4393	17391	67.9	32.1	25-40
2.36	3584	20975	81.8	18.2	15-30
0.600	2412	23387	91.2	8.8	8-22
0.075	1948	25335	98.8	1.2	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/Gradation/2014-15

20.05.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, BBMP, Bangalore.

Name of Work : Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.

Reference : EE/BTP/BBMP/KRIDL/WO/ /2013-14

Date of Testing : 20.05.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 25830

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	952	952	3.7	96.3	95-100
22.4	6495	7447	28.8	71.2	60-80
11.2	5686	13133	50.8	49.2	40-60
4.75	4353	17486	67.7	32.3	25-40
2.36	3564	21050	81.5	18.5	15-30
0.600	2473	23523	91.1	8.9	8-22
0.075	2012	25535	98.9	1.1	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/Gradation/2014-15

20.05.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, BBMP, Bangalore.

Name of Work : Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.

Reference : EE/BTP/BBMP/KRIDL/WO/ /2013-14

Date of Testing : 20.05.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 26010

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	1025	1025	3.9	96.1	95-100
22.4	6532	7557	29.1	70.9	60-80
11.2	5894	13451	51.7	48.3	40-60
4.75	4178	17629	67.8	32.2	25-40
2.36	3576	21205	81.5	18.5	15-30
0.600	2647	23852	91.7	8.3	8-22
0.075	1863	25715	98.9	1.1	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/Gradation/2014-15 20.05.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, BBMP, Bangalore.

Name of Work : Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.

Reference : EE/BTP/BBMP/KRIDL/WO/ /2013-14

Date of Testing : 20.05.2014

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): 25450

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	979	979	3.8	96.2	95-100
22.4	6235	7214	28.3	71.7	60-80
11.2	5547	12761	50.1	49.9	40-60
4.75	4326	17087	67.1	32.9	25-40
2.36	3529	20616	81.0	19.0	15-30
0.600	2645	23261	91.4	8.6	8-22
0.075	1894	25155	98.8	1.2	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/AIV/2014-15

21.05.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, BBMP, Bangalore.
Name of the Work	Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.
Reference	EE/BTP/BBMP/KRIDL/WO/ /2013-14
Source / Location	WMM Plant
Type of Mix	Wet Mix Macadam
Date of Testing	21.05.2014

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	383	384	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	80	82	84	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	303	302	302	
4	Aggregate Impact value = percent fines	20.89	21.35	21.76	
	100* (W_2/W_1)%				21.33

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples received in the laboratory

→ Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/AIV/2014-15

21.05.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, BBMP, Bangalore.
Name of the Work	Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.
Reference	EE/BTP/BBMP/KRIDL/WO/ /2013-14
Source / Location	WMM Plant
Type of Mix	Wet Mix Macadam
Date of Testing	21.05.2014

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	380	382	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	84	86	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	296	296	298	
4	Aggregate Impact value = percent fines	22.11	22.51	22.80	
	100* (W_2/W_1)%				22.47

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples received in the laboratory

→ Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/AIV/2014-15

21.05.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, BBMP, Bangalore.
Name of the Work	Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.
Reference	EE/BTP/BBMP/KRIDL/WO/ /2013-14
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	21.05.2014

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	377	379	382	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	79	82	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	298	297	297	
4	Aggregate Impact value = percent fines	20.95	21.64	22.25	
	100* (W_2/W_1)%				21.61

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples received in the laboratory

→ Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/AIV/2014-15

21.05.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, BBMP, Bangalore.
Name of the Work	Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.
Reference	EE/BTP/BBMP/KRIDL/WO/ /2013-14
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	21.05.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	378	381	384	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	79	82	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	299	299	299	
4	Aggregate Impact value = percent fines	20.90	21.52	22.14	
	100* (W_2/W_1)%				21.52

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples received in the laboratory

→ Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಆಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/Shape.T/2014-15 : 22.05.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, BBMP, Bangalore.
Name of Work	: Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/KRIDL/WO/ /2013-14
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Wet Mix Macadam
Date of Testing	: 22.05.2014

Result : Flakiness Index = **13.26%**

Elongation Index = **11.85%**

Result : Combined Flakiness & Elongation index 25.11%

Comments:

→ Maximum allowable Flakiness & Elongation Index for Wet mix Macadam is 30%

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯುಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/Shape.T/2014-15 : 22.05.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, BBMP, Bangalore.
Name of Work	: Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/KRIDL/WO/ /2013-14
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Wet Mix Macadam
Date of Testing	: 22.05.2014

Result : Flakiness Index = **13.42%**

Elongation Index = **11.57%**

Result : Combined Flakiness & Elongation index 24.99%

Comments:

→ Maximum allowable Flakiness & Elongation Index for Wet mix Macadam is 30%

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/Shape.T/2014-15 : 22.05.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, BBMP, Bangalore.
Name of Work	: Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/KRIDL/WO/ /2013-14
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Wet Mix Macadam
Date of Testing	: 22.05.2014

Result : Flakiness Index = **13.37%**

Elongation Index = **11.16%**

Result : Combined Flakiness & Elongation index 24.53%

Comments:

→ Maximum allowable Flakiness & Elongation Index for Wet mix Macadam is 30%

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/Shape.T/2014-15 : 22.05.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, BBMP, Bangalore.
Name of Work	: Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/KRIDL/WO/ /2013-14
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Wet Mix Macadam
Date of Testing	: 22.05.2014

Result : Flakiness Index = **13.45%**

Elongation Index = **11.82%**

Result : Combined Flakiness & Elongation index 25.27%

Comments:

→ Maximum allowable Flakiness & Elongation Index for Wet mix Macadam is 30%

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/AL/2014-15

22.05.2014

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, BBMP, Bangalore.

Name of Work : Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.

Reference : EE/BTP/BBMP/KRIDL/WO/ /2013-14

Date of Testing : 22.05.2014

Material : WMM

Sample Location : WMM Mix Plant

As per MORTH Table 400-11

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	21.45	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Civil-Tech Consultants & Engineers Bangalore

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
 # 23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/AL/2014-15

22.05.2014

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, BBMP, Bangalore.

Name of Work : Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.

Reference : EE/BTP/BBMP/KRIDL/WO/ /2013-14

Date of Testing : 22.05.2014

Material : WMM

Sample Location : WMM Mix Plant

As per MORTH Table 400-11

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	23.60	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
 # 23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-26

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/AL/2014-15 22.05.2014

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, BBMP, Bangalore.

Name of Work : Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.

Reference : EE/BTP/BBMP/KRIDL/WO/ /2013-14

Date of Testing : 22.05.2014

Material : WMM

Sample Location : WMM Mix Plant

As per MORTH Table 400-11

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	20.75	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Civil-Tech Consultants & Engineers Bangalore

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-28

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.06/KRIDL/WMM/AL/2014-15

22.05.2014

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, BBMP, Bangalore.

Name of Work : Improvements to roads and drains at Amarajothi Colony, Anjandri Layout in Ward No. 06, Thanisandra Village Limits, BBMP, Bangalore.

Reference : EE/BTP/BBMP/KRIDL/WO/ /2013-14

Date of Testing : 22.05.2014

Material : WMM

Sample Location : WMM Mix Plant

As per MORTH Table 400-11

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	22.90	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Civil-Tech Consultants & Engineers Bangalore

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory
3. Any Query regarding the report must be reported within 15 days from the date of testing.

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthi Ganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24